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| APPLICATION NO.         | FILING DATE | FIRST NAMED INVENTOR  | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-------------------------|-------------|-----------------------|---------------------|------------------|
| 10/032,844              | 10/24/2001  | Kenneth H. Potter JR. | 112025-0458         | 9060             |
| 24267                   | 7590        | 01/09/2006            | EXAMINER            |                  |
| CESARI AND MCKENNA, LLP |             |                       | JAIN, RAJ K         |                  |
| 88 BLACK FALCON AVENUE  |             |                       | ART UNIT            |                  |
| BOSTON, MA 02210        |             |                       | PAPER NUMBER        |                  |
|                         |             |                       | 2664                |                  |

DATE MAILED: 01/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|   |                                      |                                      |  |
|---|--------------------------------------|--------------------------------------|--|
| <p style="text-align: center;"><b>Office Action Summary</b></p> | <b>Application No.</b><br>10/032,844 | <b>Applicant(s)</b><br>POTTER ET AL. |  |
|   | <b>Examiner</b><br>Raj Jain          | <b>Art Unit</b><br>2664              |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11/04/05.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 4, 5, 7, 10-12, 14, 15, 17, 19, 23, 24, 26, 29-33, 35, 38, 41, 42, 48 and 49 is/are rejected.
- 7) ☒ Claim(s) 2, 3, 6, 8, 9, 13, 16, 18, 21, 22, 25, 27, 28, 34, 36, 37, 39, 40, 43-47 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

Claims 1-49 examined on the merits.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4, 5, 7, 10-12, 14, 15, 17, 19, 23, 24, 26, 32, 33, 35, 38, 41, 42, 48 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chandra et al (US006058389A ) in view of Spaur et al (US006122514A).

Regarding claims 1, 20, 35, 42 and 48 Chandra discloses a means by method and apparatus for performing a scheduling function (see abstract, Figs. 1 & 2, col 3 lines 15-23, col 4 lines 49-55, the system queues messages for scheduling and execution within a queue table 200 for scheduling.) the method comprising the steps of:

- receiving a request to schedule an event (see Fig. 2, col 3 lines 1-15, col 6 lines 64-col 7 line 4, an event is scheduled as a receive request is sent to the queue table 200 for processing the request.);

- calculating an expiration time associated with the event using information contained in the request, (see col 2 lines 44-47, col 3 lines 1-30, col 8 line 60 –67, col 10 lines 22-26, each queue has an expiration time which is defined for each message

within the queue, thus infact an expiration time is calculated based on the message or event within the queue.);

- determining if conditions are met to issue a notification, the conditions at least including that the expiration time has been reached (see col 28 lines 17-30, Figs. 4a-b, see Fig. 7B and col 29 lines 4-39, the queuing system includes a time manager to determine if certain conditions are met and in this case delay and expiration times for enqueue request to dequeue process if a delay is complete or not).

Chandra fails to disclose output channel selection based on channel information and issuing notification for channel availability if certain conditions are met.

Spaur discloses output channel selection based on channel information and network parameter characteristics and issuing a notification to that effect (see abstract, Fig. 1, col 2 lines 24-31, 57-67), Spaur discloses a link selector 64 to access a communications link based on network channel parameters. Each channel is analyzed in view of the particular application requirements and than channel selection is made, thus allowing for the optimum channel allocation based on specific application parameter requirements. In addition to channel selection the link scheduler 70 in combination with the link selector 64 makes a determination of channel availability and notifies the link selector to prepare for switching to another network channel at an appropriate time (see col 3 line 45 – col 4 line 36).

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made incorporate a link selector controller module within Chandra so as

to enhance the channel selection process by allowing for the optimum channel allocation based on specific application parameter requirements.

Further with respect to claim 48, Chandra discloses a computer readable medium for performing above said functions (see col 4 line 17- col 18 line 49).

Regarding claim 32, Chandra discloses a method for determining when a packet can be dequeued to an output channel (see abstract, Figs. 1 & 2, col 3 lines 15-23, col 4 lines 49-55, the system queues messages for scheduling and execution within a queue table 200 for scheduling), the method comprising the steps of:

-scheduling an event associated the output channel (see Fig. 2, col 3 lines 1-15, col 6 lines 64-col 7 line 4, an event is scheduled as a receive request is sent to the queue table 200 for processing the request);; and

Chandra fails to disclose output channel selection based on channel information and issuing notification for channel availability.

Spaur discloses output channel selection based on channel information and network parameter characteristics and issuing a notification to that effect (see abstract, Fig. 1, col 2 lines 24-31, 57-67), Spaur discloses a link selector 64 to access a communications link based on network channel parameters. Each channel is analyzed in view of the particular application requirements and than channel selection is made, thus allowing for the optimum channel allocation based on specific application parameter requirements. In addition to channel selection the link scheduler 70 in combination with the link selector 64 makes a determination of channel availability and

notifies the link selector to prepare for switching to another network channel at an appropriate time (see col 3 line 45 – col 4 line 36).

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made incorporate a link selector controller module within Chandra so as to enhance the channel selection process by allowing for the optimum channel allocation based on specific application parameter requirements.

Regarding claims 41 and 49, Chandra discloses a method for a processor to offload event scheduling (see abstract, Figs. 1 & 2, col 3 lines 15-23, col 4 lines 49-55, the system queues messages for scheduling and execution within a queue table 200 for scheduling.), comprising the steps of:

- issuing a request to schedule an event (see Fig. 2, col 3 lines 1-15, col 6 lines 64-col 7 line 4, an event is scheduled as a receive request is sent to the queue table 200 for processing the request) to a separate scheduling assist function (a separate assist function is based on the control information describing how to order, schedule and execute the message which can include a separate result queue see abstract, col 3 lines 16-25),

- the information sufficient to calculate an expiration time for the event at the output channel (see col 2 lines 44-47, col 3 lines 1-30, col 8 line 60 –67, col 10 lines 22-26, each queue has an expiration time which is defined for each message within the queue, thus infact an expiration time is calculated based on the message or event within the queue); and

-when the expiration time is less than OR equal to a current time, (see Fig. 9A, 7B, col 15 lines 37-54, col 29 lines 4-55, the queuing system includes a time manager to determine if certain conditions are met and in this case delay and expiration times for enqueue a request or dequeue a process if a delay is complete or not based on set expiration time values).

Chandra fails to disclose output channel selection based on channel information and issuing notification for channel availability.

Spaur discloses output channel selection based on channel information and network parameter characteristics and issuing a notification to that effect (see abstract, Fig. 1, col 2 lines 24-31, 57-67), Spaur discloses a link selector 64 to access a communications link based on network channel parameters. Each channel is analyzed in view of the particular application requirements and then channel selection is made, thus allowing for the optimum channel allocation based on specific application parameter requirements. In addition to channel selection the link scheduler 70 in combination with the link selector 64 makes a determination of channel availability and notifies the link selector to prepare for switching to another network channel at an appropriate time (see col 3 line 45 – col 4 line 36).

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made incorporate a link selector controller module within Chandra so as to enhance the channel selection process by allowing for the optimum channel allocation based on specific application parameter requirements.

Further with respect to claim 49, Chandra discloses a computer readable medium for performing above said functions (see col 4 line 17- col 18 line 49).

Regarding claims 4, 7, 11, 14, 17, 19, 23, 26, and 38, Chandra discloses series of validity checks that compares expiration times and if it meets or exceeds some delay value and or threshold (see col 15 lines 37-54, fig.9a).

Regarding claims 5, 15, and 24, Chandra discloses selecting an event table entry from a plurality of event table entries and associated expiration times with each message (see Fig. 2, 200, 208, col 7 lines 4-50), the columns in queue table 200 consist of number of different entries such as message state, delay, and expiration values, etc.

Regarding claim 10, Chandra discloses updating of an event (see col 19, lines 12-27.)

Regarding claim 12, Chandra discloses a computer readable medium for executing instructions (see 4 lines 49-67).

Regarding claim 33, Chandra discloses issuing a request to a scheduling assist function (see Fig. 2, col 3 lines 1-15, col 6 lines 64-col 7 line 4, an event is scheduled as a receive request is sent to the queue table 200 for processing the request.);

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 29-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Chandra et al (US006058389A).

Regarding claim 29, Chandra discloses a processor (104, Fig. 1) and Queue Time Manager for scheduling assist function (see Figs. 6Bm 7A-7C, col 28 line 16-col 29 line 39).

Regarding claim 30, Chandra discloses means for calculating an expiration time associated with a scheduled event (see col 2 lines 44-47, col 3 lines 1-30, col 8 line 60-67, col 10 lines 22-26, each queue has an expiration time which is defined for each message within the queue, thus infact an expiration time is calculated based on the message or event within the queue.)

Regarding claim 31, Chandra discloses selecting an event table entry from a plurality of event table entries and associated expiration times with each message (see Fig. 2, 200, 208, col 7 lines 4-50), the columns in queue table 200 consist of number of different entries such as message state, delay, and expiration values, etc.

### ***Allowable Subject Matter***

Claims 2, 3, 6, 8, 9, 13, 16, 18, 21, 22, 25, 27, 28, 34, 36, 37, 39, 40, 43-47 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

Applicant's arguments with respect to claims 1-49 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raj Jain whose telephone number is 571-272-3145. The examiner can normally be reached on M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax number for the organization where this application is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.

RJ  
January 4, 2006

  
**Ajit Patel**  
**Primary Examiner**